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| 09/834,504      | 04/13/2001  | Masato Shimakawa     | 450100-03160        | 5787             |

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EXAMINER

WOZNIAK, JAMES S

| ART UNIT | PAPER NUMBER |
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2655

DATE MAILED: 04/05/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/834,504

Applicant(s)

SHIMAKAWA, MASATO

Examiner

James S. Wozniak

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04/13/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**Detailed Action**

***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
2. The following title is suggested: "Speech Command Recognition Apparatus, Method, and Storage Medium Used Therewith for Controlling a Plurality of Electronic Devices over a Network."

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1, 2, 6, 7, 10, and 13** are rejected under 35 U.S.C. 102(e) as being anticipated by Everhart et al (*U.S. Patent: 6,240,347*).

With respect to **Claims 1 and 13**, Everhart discloses:

An information processing apparatus and method for controlling, in accordance with speech commands input by the user, a plurality of electronic apparatuses on a network connected to said information processing apparatus, said information processing apparatus comprising:

Command definition information obtaining means for obtaining command definition information that defines the correspondence between a plurality of speech commands which are to be input by the user and a plurality of control commands for controlling said plurality of electronic apparatuses (*speech processor for recognizing an utterance and determining its associated command, Col. 1, Lines 51-54*);

Storage means for storing said command definition information obtained by said command definition information obtaining means (*voice application software within a speech processor to determine a command function from a speech input, Col. 3, Lines 11-17. Also, it would be inherent that the voice application command definitions would be contained in a storage means to provide system access to all valid speech commands and enable their updating*);

Speech recognition means for recognizing a speech command input by the user (*speech processor, Col. 1, Lines 51-54*);

Determining means for determining a control command corresponding to the speech command as recognized by said speech recognition means, based on said command definition information stored in said storage means (*voice application software for determining a command related to a speech input, Col. 3, Lines 15-17*); and

Control means for controlling one of said plurality of electronic apparatuses using the control command determined by said determining means (*speech processor that recognizes*

*commands and transmits the corresponding function to a controllable device, Col. 1, Lines 51-54).*

With respect to **Claim 2**, Everhart recites:

An information processing apparatus, wherein said command definition information is associated with ID information of said plurality of electronic apparatuses *(specific voice commands identifying a particular device, upon which a control function will be performed, such as vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33).*

With respect to **Claim 6**, Everhart discloses:

An information, further comprising ID information obtaining means for obtaining ID information of said plurality of electronic apparatuses, wherein said command definition information obtaining means obtains said command definition information based on the ID information of said plurality of electronic apparatuses obtained by said ID information obtaining means *(speech processor that recognizes commands, identifies the corresponding controllable device and function, and transmits the command to the appropriate device, Col. 1, Lines 51-54).*

With respect to **Claim 7**, Everhart recites:

An information processing apparatus, wherein said ID information includes at least one of node ID, product ID, machine ID, and type ID *(specific voice commands identifying a particular device (type ID), upon which a control function will be performed, such as vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33).*

With respect to **Claim 10**, Everhart discloses:

An information processing apparatus, further comprising selecting means for allowing the user to select one of said plurality of electronic apparatuses, wherein said determining means

is allowed to determine the control command corresponding to the speech command as recognized by said speech recognition means, based on only part of said command definition information corresponding to the electronic apparatus selected by said selecting means (*key words identifying a particular device, upon which a control function will be performed, such as vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33, thus since a particular device is identified, further parameter adjustment through speech recognition will be directed only to the selected device, Col. 5, Lines 56-58*).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Vanbuskirk et al (*U.S. Patent: 6,308,157*).

With respect to **Claim 3**, Everhart teaches the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function, as applied to Claim 1. Everhart does not teach a means of defining acceptable commands based on device operation status, however Vanbuskirk discloses:

An information processing apparatus, wherein said command definition information defines, on the basis of operation status of said plurality of electronic apparatuses, acceptable speech commands, control commands corresponding to the speech commands, and transitions of operation status which occur on execution of each of the control commands (*monitoring a system state of operation and determining acceptable voice commands for a current state, Col. 2, Lines 29-35*).

Everhart and Vanbuskirk are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of determining a system state of operation so as to define acceptable speech commands for the current state as taught by Vanbuskirk with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function as taught by Everhart to create a less error-prone speech command interface by decreasing the quantity of acceptable speech commands (some of which may have no function at a particular operation state) through the determination of a device operation state and its associated commands, Vanbuskirk, Col. 2, Lines 39-44. Therefore, it would have been obvious to combine Vanbuskirk with Everhart for the benefit of obtaining a less complex speech command interface by determining a device operation state and associated commands, to obtain the invention as specified in Claim 3.

With respect to Claim 4, Everhart teaches the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to

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perform a requested function, as applied to Claim 1. Everhart does not teach the ability to detect a state of device and its associated command function, however Vanbuskirk discloses:

An information processing apparatus, wherein said determining means comprises operation status detecting means for detecting the operation status of said plurality of electronic apparatuses, whereby said determining means determines, in accordance with the operation status of said plurality of electronic apparatuses detected by said operation status detecting means, the control command corresponding to the speech command as recognized by said speech recognition means, based on said command definition information (*monitoring a system state of operation and determining acceptable voice commands corresponding to a system function for a current state, Col. 2, Lines 29-35, and voice commands associated with a particular function for a current state, Fig. 5*).

Everhart and Vanbuskirk are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of detecting a state of device operation and determining the appropriate voice commands and corresponding functions as taught by Vanbuskirk with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function as taught by Everhart to reduce command processing errors by identifying a device operation state and making available only those commands and functions that would be applicable since not all commands and functions would be appropriate during every command state. Therefore, it would have been obvious to combine Vanbuskirk with Everhart for the benefit of implementing less complex processing within a speech command interface system by detecting a



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device state of operation and limiting available commands and functions to only those which are applicable for a particular state, to obtain the invention as specified in Claim 4.

6. **Claims 5, 8, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al.

With respect to **Claim 5**, Everhart teaches the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function, as applied to Claim 1. Everhart does not specifically suggest that command definition information is obtained from a server or storage medium; however, it would have been obvious to one of ordinary skill in the art, at the time of invention, to obtain command definition information from a server or computer readable medium since storage of speech command information on a server or storage medium is a means, well-known in the art, of providing access to speech command information at a central location, thus reducing needed memory at a local controllable device.

With respect to **Claim 8**, Everhart teaches the speech command recognition method featuring device identification means as applied to Claim 6. Everhart does not specifically suggest command definition information obtained based on node, product, machine, or type ID, in that order of priority, however, it would have been obvious to one of ordinary skill in the art, at the time of invention, to obtain command data for the devices located in the command recognition system taught by Everhart in the specified order given above because it would allow for a logical progression of acquiring command functions. For example, a system would first look to a node, then a specific product ID unique to a machine to identify a command function.

If, at that point, the command data could not be acquired, it would be necessary to further obtain a more general device classification such as manufacturer ID, and then the particular type ID of device made by that manufacturer in order to create a compatible command interface with a similar machine.

With respect to **Claim 14**, Everhart teaches the speech command recognition method capable of identifying a speech input as being associated with a particular device in order to perform a requested function, as applied to Claim 13. Everhart does not specifically suggest command definition storage on a computer readable medium, however, it would have been obvious to one of ordinary skill in the art, at the time of invention, to store the speech commands taught by Everhart on a computer readable medium to increase command compatibility and usability by providing a means for command use with multiple computer systems.

7. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Nguyen et al (*U.S. Patent: 6,219,703*).

With respect to **Claim 9**, Everhart teaches the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function, as applied to Claim 1. Everhart does not teach a means for connection status detection that is further utilized to add and delete command information accordingly, however Nguyen discloses:

An information processing apparatus, further comprising connection status detecting means for detecting the connection status of said plurality of electronic apparatuses, wherein said command definition information obtaining means obtains and deletes said command definition

information based on the connection status of said plurality of electronic apparatuses detected by said connection status detecting means (*detecting the presence of a device on a network and obtaining device data upon detection, Col. 2, Lines 7-11*).

Everhart and Nguyen are analogous art because they are from a similar field of endeavor in device control over a network. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of detecting the presence of a device on a network and obtaining device management data upon detection as taught by Nguyen with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function as taught by Everhart to create a more adaptive command recognition system, capable of adding command data in the form of a speech vocabulary upon the addition of a new device to a network. Also, it would have been obvious to one of ordinary skill in the art, at the time of invention, to use the device detection capabilities as taught by Nguyen to detect the removal of a device, since if new data is added upon connection, it would be obvious to delete data upon device removal in order to conserve system memory and reduce recognition errors. Therefore, it would have been obvious to combine Nguyen with Everhart for the benefit of creating a more adaptive command recognition system through the detection of device connection status that determines the removal or addition of command data, to obtain the invention as specified in Claim 9.

8. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Diehl et al (*U.S. Patent: 6,052,666*).

With respect to Claim 11, Everhart teaches the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function, as applied to Claim 1. Everhart does not teach a command history for operating the most recently used device if it is unclear as to which device a speech command relates, however Diehl discloses:

An information processing apparatus, further comprising control command history storage means for storing history information regarding the control command determined by said determining means, wherein an electronic apparatus in accordance with a user input or an electronic apparatus which is found to be most recently operated according to the history information stored in said control command history storage means is controlled using the control command, if it is not otherwise determined which of said plurality of electronic apparatuses be controlled using the control command (*generating a list of several devices that pertain to a single command and determining the target device through a statistical approach, Col. 3, Lines 41-46, and a change channel command received after a TV set has been turned on. Since, in this case, the TV was the last device used, it would be more probable that the command would be related to the TV rather than a VCR, Col. 4, Lines 3-6*).

Everhart and Diehl are analogous art because they are from a similar field of endeavor in speech-controlled systems over a network. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of transmitting a command to a most probable device through a statistical approach when a command pertains to more than one device as taught by Diehl with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a

requested function as taught by Everhart to create a command recognition system in which command confusion is prevented by selecting a most probable device when a single command pertains to more than one device. Also, it would have been obvious to one of ordinary skill in the art, at the time of invention, that a most previously operated device would also be a most probable device for receiving a voice command (as in a case of commands for repeatedly changing channels on a television), thus implementing usage history in determining a most probable device to receive a command. Therefore, it would have been obvious to combine Diehl with Everhart for the benefit of eliminating device confusion in a speech command interface system by determining a most probable device for receiving a command based on usage history when a single command pertains to more than one device, to obtain the invention as specified in Claim 11.

9. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Peck et al (*U.S. Patent: 5,375,063*).

With respect to **Claim 12**, Everhart teaches the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function, as applied to Claim 1. Everhart does not teach the ability of the user to create a command vocabulary, however Peck discloses:

An information processing apparatus, further comprising command definition information generation means for generating command definition information as desired, wherein said command definition information obtaining means is allowed to obtain said command definition information from said command definition information generation means

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*(creation of a user command vocabulary and corresponding device control signals, Col. 10, Lines 5-20).*

Everhart and Peck are analogous art because they are from a similar field of endeavor in speech-controlled systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the ability of a user to create a command vocabulary relating to device control signals as taught by Peck with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function as taught by Everhart to create a speech controlled system that is easier to use since a user is not required to learn specific commands in order to operate a device and can create a user-specific command vocabulary. Therefore, it would have been obvious to combine Peck with Everhart for the benefit of creating a user-configurable speech controlled system, to obtain the invention as specified in Claim 12.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Van Kleeck et al (*U.S. Patent: 5,890,122*)- discloses a speech-controlled computer capable of determining acceptable commands for a particular operation state.
- Byers (*U.S. Patent: 6,219,645*)- teaches a speech command recognition system for use with a plurality of devices on a communication bus or LAN.

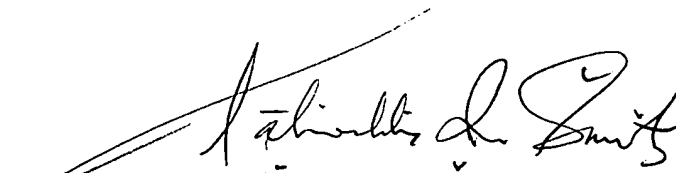
- Has et al (*U.S. Patent: 6,230,137*)- teaches a speech recognition system used for recognizing commands directed to devices on a communication bus via a central processor.
- Buchner et al (*U.S. Patent: 6,535,854*)- discloses a speech control system for electronic devices that features a single speech processor connected to a network to recognize commands, the ability of a user to generate commands, and detection means for determining device connection status.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (703) 305-8669 and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-Fridays, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Ivars Smits can be reached at (703) 306-3011. The fax/phone number for the Technology Center 2600 where this application is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center receptionist whose telephone number is (703) 306-0377.

James S. Wozniak  
3/31/2004



TĀLIVALDIS IVARS ŠMITS  
PRIMARY EXAMINER